

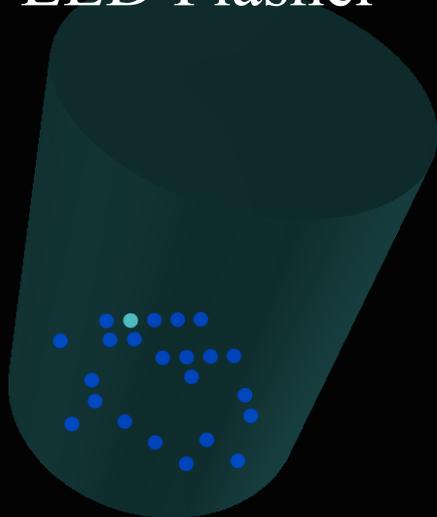
ANNNIE Status

Carrie McGivern

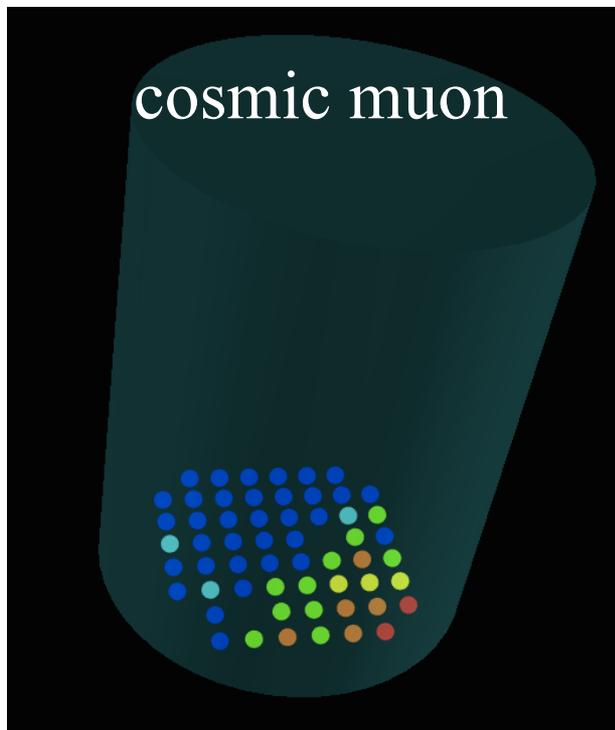
AEM :: May 9, 2016

- LED flasher data
- Cosmics and Beam data
- Developing trigger and offline analysis code

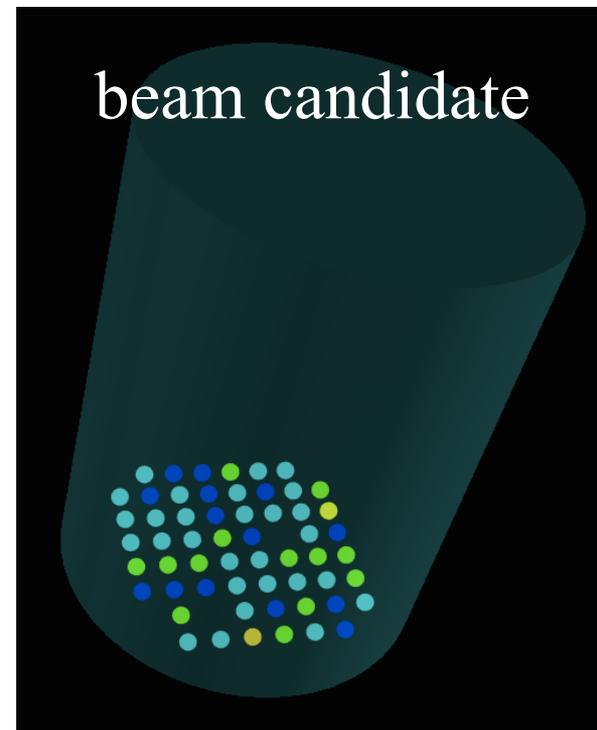
LED Flasher



cosmic muon

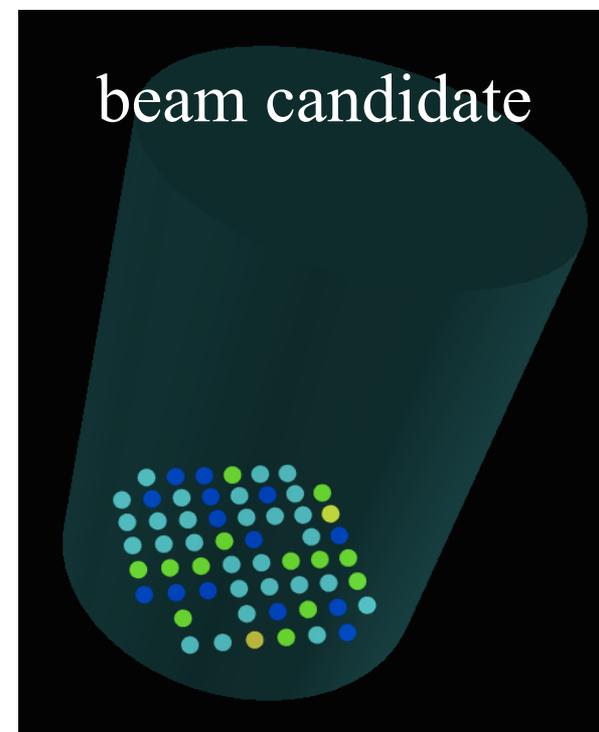
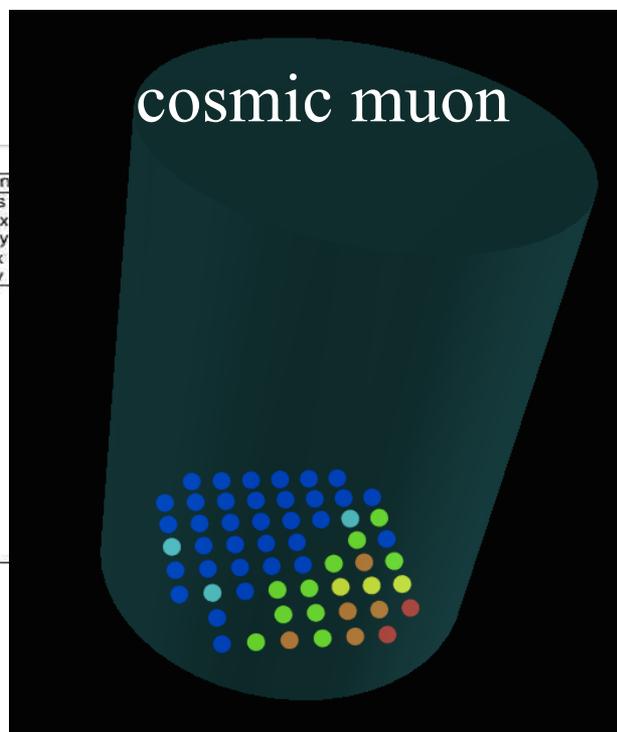
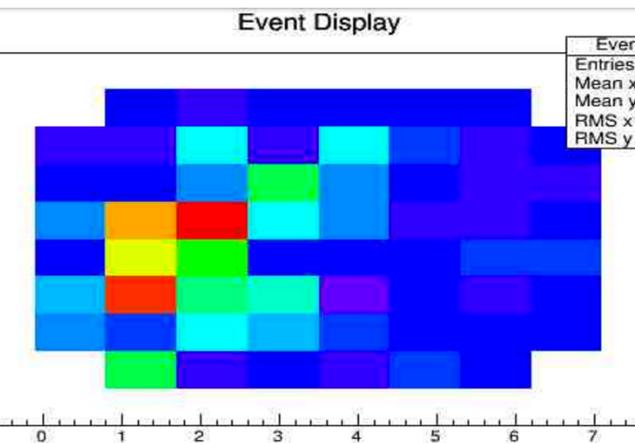


beam candidate

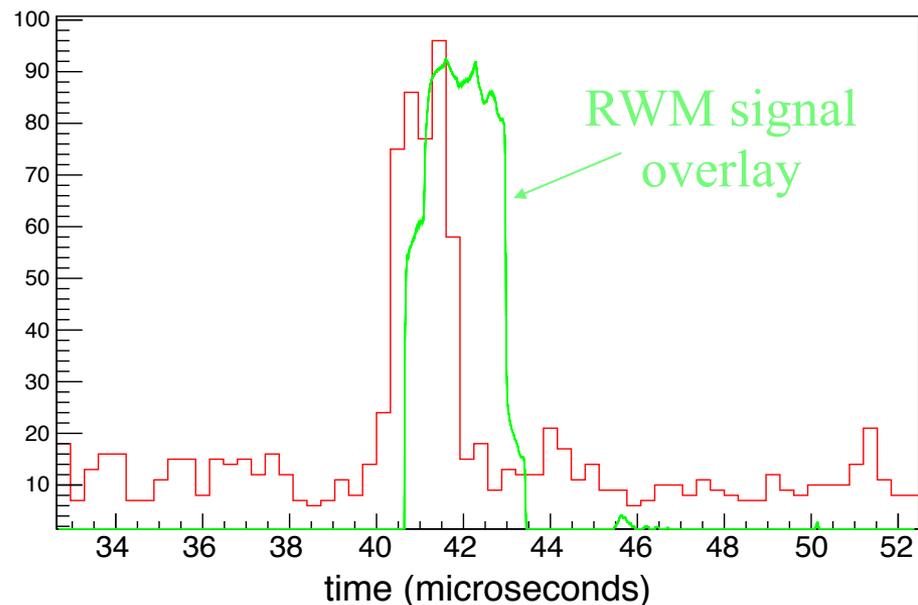
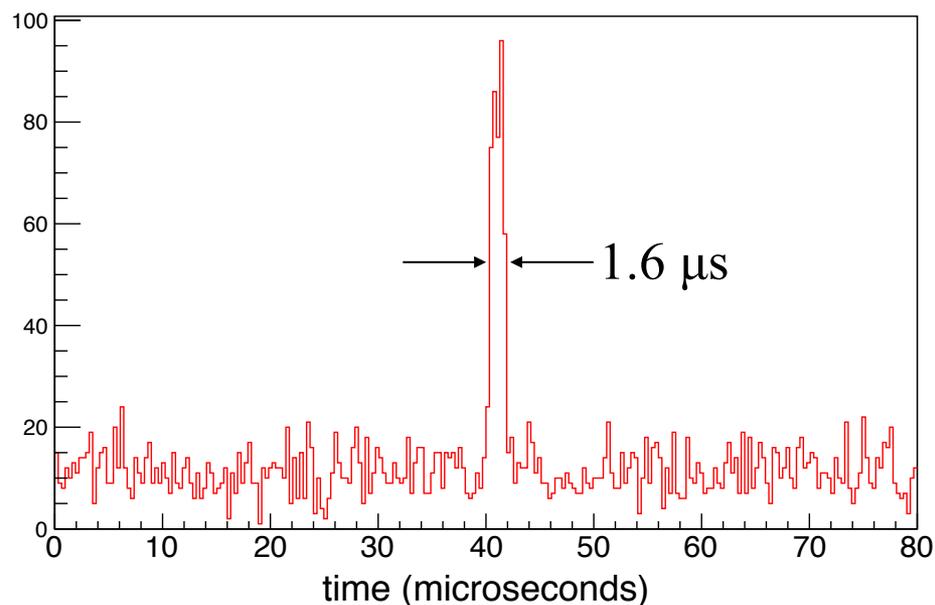


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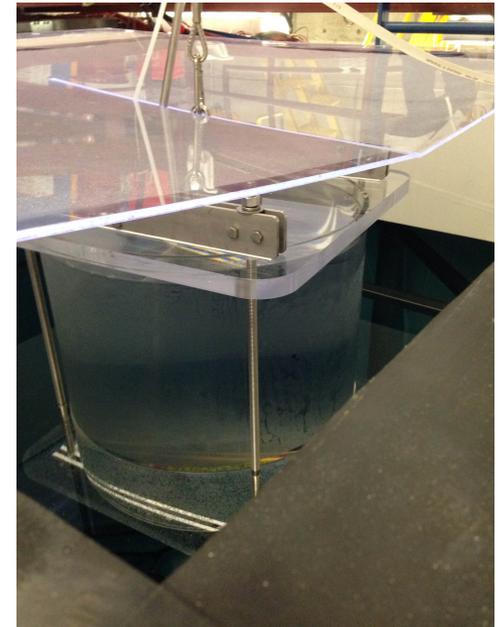
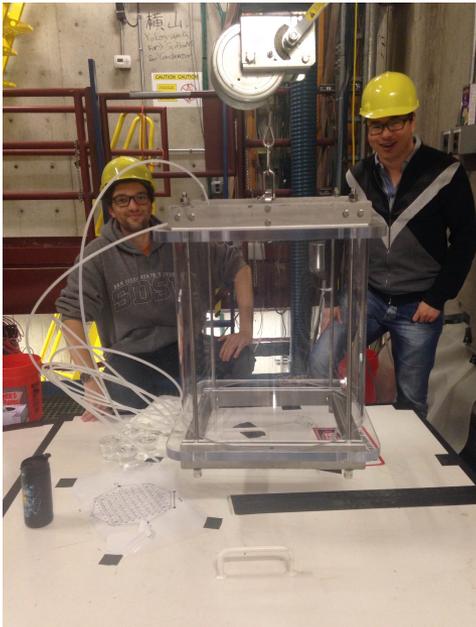
LED Flasher



- Trigger on the \$1D/\$1F signals, also record the RWM signal
- Found the beam in our data!



- Filled with EJ-335 liquid scintillator
 - 45% mineral oil, 45% pseudocumene (1,2,4-trimethyl benzene)



- Neutron Capture Vessel (50 in x 50 in, 96 liters)

- Worked closely with ESH&Q and Fire Dept. to ensure a safe fill

- Pigtail connector on a negative HV card failed
 - Ordered new connector parts and enlisted Wayne Johnson (NML) to help us rebuild it (along with a spare)
- Mild sparking in splitter boxes at high voltage (~ 1600 V)
 - Sparking along the bottom of some of the capacitors
 - Tested and verified with a spare box at ISU
 - Due to flux residue trapped under the capacitors
 - Cleaned, conformally coated applied, and tested to at least 2500 V
- A handful of tank PMTs have high current when powering on
 - Suspect possible water sweeping into the cable
 - Running at low voltage (when not in use) prevents high currents from reoccurring, still investigating
 - These PMTs are not necessary for ANNIE to meet Run I physics goals

- Continue commissioning with the NCV in place
 - Establish run plan for various NCV locations
- Start taking 24/7 shifts this week
 - Acquire further operational experience
- Continue to analyze data
 - Determine cosmic muon rates,
 - Search for neutron captures,
 - Take additional LED flasher data